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# **INSTRUMENTATION FOR THE SIO MARINE OBSERVATORY**

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## **LONG TERM GOALS**

To instrument the Marine Observatory at Scripps Institution of Oceanography that will provide researchers, development engineers, resource managers and others access to platforms that can be used to help develop new technologies; that will provide long time series measurements; and that will support multidisciplinary measurements in the littoral zone and across the coastal ocean.

## **SCIENTIFIC OBJECTIVES**

The objectives of this contract are to refurbish and modify two 10-m NDBC buoys to make oceanographic and meteorological measurements in the littoral zone and coastal ocean; to equip these platforms with a basic set of sensors and to make these data available to the community through a networked data acquisition system; to demonstrate the suitability of these platforms for basic and applied research in the coastal ocean and littoral zone; to make available these platforms to the research community to be used for the development of new technologies and for basic and applied research projects in the coastal ocean.

## **APPROACH**

Understanding the processes that control the coastal ocean and littoral zone requires a comprehensive system of physical, chemical, biological and geological measurements between the shoreline and the continental slope. To demonstrate the utility of these measurements we are developing a Marine Observatory at Scripps Institution of Oceanography. The DURIP funds are providing the basic sensors to make a variety of meteorological measurements from the buoys.

## **WORK COMPLETED**

The refurbishment of both 10-m buoys has been completed. Most of the sensors have been purchased or are on order. Buoy #1 has been equipped with basic meteorological and oceanographic sensors. A data telemetry and acquisition system has been developed for these sensors.

## **RESULTS**

Not applicable to this contract at this time.

## **IMPACTS**

This project has engendered considerable interest within the local community in San Diego as a source of meteorological and oceanographic data for use by schools and university researchers. Information from these platforms is available also to 3rd Fleet operations in San Diego coastal waters.

## **TRANSITIONS**

Not applicable to this contract at this time.

## **RELATED PROJECTS**

Several other programs are using Buoy #1 as a facility to test new measurement techniques. A group at IGPP are developing a GPS seismic array that can be deployed on the buoy. A group at NRAD are using the buoy as a source for a low-flyer detection program.